D 14

```
MMM         MMM     AAAAAAAAA        IIIIIIIII     LLL
MMM         MMM     AAAAAAAAA        IIIIIIIII     LLL
MMM         MMM     AAAAAAAAA        IIIIIIIII     LLL
MMMMMM   MMMMMM  AAA         AAA        III        LLL
MMMMMM   MMMMMM  AAA         AAA        III        LLL
MMMMMM   MMMMMM  AAA         AAA        III        LLL
MMM   MMM   MMM  AAA         AAA        III        LLL
MMM   MMM   MMM  AAA         AAA        III        LLL
MMM   MMM   MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAAAAAAAAAAAAAA        III        LLL
MMM         MMM  AAAAAAAAAAAAAAA        III        LLL
MMM         MMM  AAAAAAAAAAAAAAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA     IIIIIIIII     LLLLLLLLLLLLLLL
MMM         MMM  AAA         AAA     IIIIIIIII     LLLLLLLLLLLLLLL
MMM         MMM  AAA         AAA     IIIIIIIII     LLLLLLLLLLLLLLL
```

```
**FILE**ID**IOSUBS                                  D  2








  IIIIII      OOOOOO      SSSSSSSS  UU      UU  BBBBBBBB      SSSSSSSS
  IIIIII      OOOOOO      SSSSSSSS  UU      UU  BBBBBBBB      SSSSSSSS
    II      OO      OO  SS          UU      UU  BB      BB  SS
    II      OO      OO  SS          UU      UU  BB      BB  SS
    II      OO      OO  SS          UU      UU  BB      BB  SS
    II      OO      OO  SS          UU      UU  BB      BB  SS
    II      OO      OO    SSSSSS    UU      UU  BBBBBBBB      SSSSSS
    II      OO      OO    SSSSSS    UU      UU  BBBBBBBB      SSSSSS
    II      OO      OO          SS  UU      UU  BB      BB          SS
    II      OO      OO          SS  UU      UU  BB      BB          SS
    II      OO      OO          SS  UU      UU  BB      BB          SS      ....
    II      OO      OO          SS  UU      UU  BB      BB          SS      ....
  IIIIII      OOOOOO    SSSSSSSS    UUUUUUUUUU  BBBBBBBB    SSSSSSSS        ....
  IIIIII      OOOOOO    SSSSSSSS    UUUUUUUUUU  BBBBBBBB    SSSSSSSS        ....


LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

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```

```
0000            .TITLE  MAIL$IOSUBS - INPUT/OUTPUT SUBROUTINES
0000            .IDENT  'V04-000'
0000    ;
0000    ;****************************************************************************
0000    ;*                                                                          *
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0000    ;*                                                                          *
0000    ;*                                                                          *
0000    ;****************************************************************************
0000    ;
0000    ;
0000    ;++
0000    ; FACILITY:     VAX/VMS MAIL UTILITY
0000    ;
0000    ; ABSTRACT:     INPUT AND OUTPUT SUBROUTINES.
0000    ;
0000    ; ENVIRONMENT:  NATIVE/USER MODE
0000    ;
0000    ; AUTHOR:       LEN KAWELL, CREATION DATE: 2-FEB-79
0000    ;
0000    ; MODIFICATION HISTORY:
0000    ;
0000    ;       V03-008 BLS0255         Benn Schreiber          28-Dec-1983
0000    ;               Correct upcase_q, use new global flags
0000    ;
0000    ;       V03-007 BLS0246         Benn Schreiber           8-Nov-1983
0000    ;               Add MAIL$IOSUB_INIT to remove statically allocated buffers
0000    ;
0000    ;       V03-006 BLS0229         Benn Schreiber          16-Jul-1983
0000    ;               Remove routines rewritten into BLISS and fold in what
0000    ;               is left of NETSEND.MAR
0000    ;
0000    ;       V03-005 BLS0220         Benn Schreiber          30-Apr-1983
0000    ;               Keyapd input routine support
0000    ;
0000    ;       V03-004 BLS0214         Benn Schreiber          27-Mar-1983
0000    ;               Add MAIL$FAO_GETMSG to GETMSG a message and then
0000    ;               apply fao to it.
0000    ;
0000    ;       V03-003 BLS0211         Benn Schreiber          13-Mar-1983
0000    ;               Rework alternate net support for more flexibility.  Handle
```

```
0000     ;               CTRL/C as EOF in MAIL$GET_INPUT
0000     ;
0000     ;       V03-002 BLS0194         Benn Schreiber          19-Nov-1982
0000     ;               Add support for alternate incoming network access
0000     ;
0000     ;       V03-001 BLS0189         Benn Schreiber          15-Oct-1982
0000     ;               Add routine to upcase except in double quote pairs
0000     ;               Add routine to do wildcard matching
0000     ;--
```

```
                 0000               .SBTTL  DECLARATIONS
                 0000      ;
                 0000      ; INCLUDE FILES:
                 0000      ;
                 0000
                 0000      ;
                 0000      ; EQUATED SYMBOLS:
                 0000      ;
        00000004 0000      BUFF_DESC          = 4                       ;BUFFER DESCRIPTOR ARGUMENT
        00000008 0000      FAOARG1            = 8                       ;FIRST FAO ARGUMENT ARGUMENT
                 0000
        00000200 0000      MAIL$K_INBUFFSZ = 512                        ;INPUT BUFFER SIZE
                 0000
                 0000               $STSDEF                             ;STATUS MESSAGE DEFINITIONS
                 0000               $SHRDEF                             ;SHARED MESSAGE DEFINITIONS
                 0000               CNCTDEF                             ;CNCT BLOCK DEFINITIONS
                 0000               LNKDEF                              ;LOGICAL LINK DEFINITIONS
                 0000               MAIFDEF                             ;MAIL CONTROL FLAG DEFINITIONS
                 0000      ;
                 0000      ; LOCAL MACROS:
                 0000      ;
                 0000
                 0000      ;
                 0000      ; OWN STORAGE:
                 0000      ;
                 0000
            00000000                .PSECT  $OWN$,LONG,RD,WRT,NOEXE
                 0000
        000000FF 0000      MSGDESC:.LONG    255                         ;EVENTUALLY A DESCRIPTOR (ORDER ASSUMED)
        00000000 0004      MSGBUF: .LONG    0
        00000200 0008      FAODESC:.LONG    512                         ;AND ANOTHER DESCRIPTOR
        00000000 000C      FAOBUF: .LONG    0
                 0010
            00000000                .PSECT  $CODE$,LONG,RD,NOWRT,EXE
```

```
                                 0000     103          .SBTTL  MAIL$IOSUB_INIT - ALLOCATE SOME BUFFERS
                                 0000     104 ;++
                                 0000     105 ; FUNCTIONAL DESCRIPTION:
                                 0000     106 ;
                                 0000     107 ;        ALLOCATE BUFFERS FOR ROUTINES IN THIS MODULE
                                 0000     108 ;
                                 0000     109 ;--
                                 0000     110
                           001C  0000     111          .ENTRY  MAIL$IOSUB_INIT,^M<R2,R3,R4>
         7E   00FF 8F      3C    0002     112          MOVZWL  #255,-(SP)                 ;SIZE OF BUFFER TO ALLOCATE
            00000004'EF    9F    0007     113          PUSHAB  MSGBUF                     ;ADDRESS OF LONGWORD TO STORE ADDR IN
                  04 AE    9F    000D     114          PUSHAB  4(SP)                      ;ADDR OF SIZE OF BUFFER
     00000000'GF      02   FB    0010     115          CALLS   #2,G^LIB$GET_VM            ;ALLOCATE IT
                  18 50    E9    0017     116          BLBC    R0,20$                     ;BRANCH IF ERROR
         6E   0200 8F      3C    001A     117          MOVZWL  #512,(SP)                  ;ALLOCATE FAO BUFFER
            0000000C'EF    9F    001F     118          PUSHAB  FAOBUF                     ;ADDR TO STORE BUFFER ADDR INTO
                  04 AE    9F    0025     119          PUSHAB  4(SP)                      ;ADDR OF SIZE OF BUFFER
     00000000'GF      02   FB    0028     120          CALLS   #2,G^LIB$GET_VM            ;ALLOCATE
                  09 50    E8    002F     121          BLBS    R0,40$                     ;BRANCH IF ALL OK
                     50    DD    0032     122 20$:     PUSHL   R0                         ;SIGNAL ERROR
     00000000'GF      01   FB    0034     123          CALLS   #1,G^LIB$SIGNAL
                           04    003B     124 40$:     RET
                                 003C     125
```

```
                                003C        .SBTTL  MAIL$CONFIRM - PROMPT FOR CONFIRMATION
                                003C  ;++
                                003C  ; FUNCTIONAL DESCRIPTION:
                                003C  ;
                                003C  ;        IF THIS IS NOT A NETWORK JOB, THEN PROMPT FOR A YES OR NO
                                003C  ;       RESPONSE AND CHECK IF YES OR NO.
                                003C  ;
                                003C  ; CALLING SEQUENCE:
                                003C  ;       CALL MAIL$CONFIRM(BUFF_DESC,PROMPT_DESC)
                                003C  ;
                                003C  ; INPUT PARAMETERS:
                                003C  ;       BUFF_DESC(AP) = ADDR OF BUFFER DESCRIPTOR
                                003C  ;       PROMPT_DESC(AP) = ADDR OF PROMPT DESCRIPTOR
                                003C  ;
                                003C  ; IMPLICIT INPUTS:
                                003C  ;       MAIL$GL_FLAGS[MAIF_V_NETJOB] = 1 IF THIS IS A NETWORK JOB.
                                003C  ;
                                003C  ; OUTPUT PARAMETERS:
                                003C  ;       NONE
                                003C  ;
                                003C  ; IMPLICIT OUTPUTS:
                                003C  ;       NONE
                                003C  ;
                                003C  ; COMPLETION CODES:
                                003C  ;       R0 = SUCCESS IF RESPONSE WAS A ''Y'',
                                003C  ;          = ERROR IF NO RESPONSE, RESPONSE WAS NOT A ''Y'', OR JOB IS
                                003C  ;            A NETWORK JOB.
                                003C  ;
                                003C  ; SIDE EFFECTS:
                                003C  ;       PROMPT DISPLAYED AND INPUT OBTAINED FROM INPUT DEVICE.
                                003C  ;
                                003C  ;--
                          0004  003C          .ENTRY  MAIL$CONFIRM,-             ;PROMPT AND GET RESPONSE
                                003E                  ^M<R2>                     ;(ENTRY MASK)
  2D 00000000'EF    01    E0    003E          BBS     #MAIF_V_NETJOB,MAIL$GL_FLAGS,20$ ;BR IF NETWORK JOB
               08 AC      DD    0046          PUSHL   8(AP)                      ;STACK PROMPT DESCRIPTOR ADDRESS
               04 AC      DD    0049          PUSHL   4(AP)                      ;STACK GET-STRING
         00000000'EF      9F    004C          PUSHAB  MAIL$L_SMG_KEYBOARD        ;AND KEYBOARD ID
     00000000'GF    03    FB    0052          CALLS   #3,G^SMG$READ_STRING       ;READ FROM SYS$INPUT
          52    04 AC     D0    0059          MOVL    BUFF_DESC(AP),R2           ;GET ADDRESS OF BUFFER DESC
                    62    B5    005D          TSTW    (R2)                       ;NO RESPONSE?
                    12    13    005F          BEQL    20$                        ;BR IF YES - NO RESPONSE = ''NO''
       04 B2    59 8F     91    0061          CMPB    #^A''Y'',@4(R2)            ;WAS RESPONSE ''YES''?
                    07    13    0066          BEQL    10$                        ;BR IF YES
       04 B2    79 8F     91    0068          CMPB    #^A''y'',@4(R2)            ;WAS RESPONSE ''yes''?
                    04    12    006D          BNEQ    20$                        ;BR IF NO
                                006F  10$:
          50        01    D0    006F          MOVL    #1,R0                      ;SET ''YES'' RESPONSE
                          04    0072          RET                                ;
                                0073  20$:
                    50    D4    0073          CLRL    R0                         ;SET ''NO'' RESPONSE
                          04    0075          RET                                ;
                                0076
```

```
                              0076   181            .SBTTL  MAIL$UPCASE - CONVERT A STRING TO UPPERCASE
                              0076   182  ;++
                              0076   183  ;
                              0076   184  ; FUNCTIONAL DESCRIPTION:
                              0076   185  ;
                              0076   186  ;         THIS ROUTINE IS CALLED TO CONVERT A STRING TO UPPER CASE CHARACTERS.
                              0076   187  ;
                              0076   188  ; INPUTS:
                              0076   189  ;
                              0076   190  ;         BUFF_DESC = ADDRESS OF STRING DESCRIPTOR.
                              0076   191  ;
                              0076   192  ; OUTPUTS:
                              0076   193  ;
                              0076   194  ;         STRING CONVERTED TO UPPERCASE.
                              0076   195  ;--
                        0004  0076   196            .ENTRY  MAIL$UPCASE,-                           ;CONVERT TO UPPER CASE
                              0078   197                    ^M<R2>                                  ;(ENTRY MASK)
      50   04 AC    D0  0078   198            MOVL    BUFF_DESC(AP),R0                        ;GET ADDRESS OF DESCRIPTOR
         51   60    3C  007C   199            MOVZWL  (R0),R1                                 ;GET SIZE OF STRING
              1B    13  007F   200            BEQL    30$                                     ;EXIT IF ZERO
      50   04 A0    D0  0081   201            MOVL    4(R0),R0                                ;GET ADDRESS OF STRING
         52   80    90  0085   202  10$:      MOVB    (R0)+,R2                                ;GET NEXT CHARACTER
      61 8F   52    91  0088   203            CMPB    R2,#^A"a"                               ;LOWER CASE LETTER?
              0B    1F  008C   204            BLSSU   20$                                     ;IF LSSU NO
      7A 8F   52    91  008E   205            CMPB    R2,#^A"z"                               ;LOWER CASE LETTER?
              05    1A  0092   206            BGTRU   20$                                     ;IF GTRU NO
 FF A0   52   20    83  0094   207            SUBB3   #32,R2,-1(R0)                           ;CONVERT TO UPPERCASE LETTER
           E9 51    F5  0099   208  20$:      SOBGTR  R1,10$                                  ;DECREMENT COUNT AND LOOP
                    04  009C   209  30$:      RET                                             ;
```

```
                          009D   211          .SBTTL  MAIL$UPCASE_Q - CONVERT A STRING TO UPPERCASE HANDLING QUOTES
                          009D   212  ;++
                          009D   213  ;
                          009D   214  ; FUNCTIONAL DESCRIPTION:
                          009D   215  ;
                          009D   216  ;         THIS ROUTINE IS CALLED TO CONVERT A STRING TO UPPER CASE CHARACTERS.
                          009D   217  ;         CHARACTERS INSIDE DOUBLE QUOTES ARE NOT CONVERTED
                          009D   218  ;
                          009D   219  ; INPUTS:
                          009D   220  ;
                          009D   221  ;         BUFF_DESC = ADDRESS OF STRING DESCRIPTOR.
                          009D   222  ;
                          009D   223  ; OUTPUTS:
                          009D   224  ;
                          009D   225  ;         STRING CONVERTED TO UPPERCASE.
                          009D   226  ;--
                    000C  009D   227          .ENTRY  MAIL$UPCASE_Q,-                  ;CONVERT TO UPPER CASE
                          009F   228                  ^M<R2,R3>                        ;(ENTRY MASK)
     50    04 AC     D0   009F   229          MOVL    BUFF_DESC(AP),R0                 ;GET ADDRESS OF DESCRIPTOR
        51    60     3C   00A3   230          MOVZWL  (R0),R1                          ;GET SIZE OF STRING
              32     13   00A6   231          BEQL    30$                              ;EXIT IF ZERO
     53    FF 8F     98   00A8   232          CVTBL   #-1,R3                           ;ASSUME NOT IN DOUBLE QUOTES
     50    04 A0     D0   00AC   233          MOVL    4(R0),R0                         ;GET ADDRESS OF STRING
        52    80     90   00B0   234  10$:    MOVB    (R0)+,R2                         ;GET NEXT CHARACTER
        22    52     91   00B3   235          CMPB    R2,#^A/"/                        ;DOUBLE QUOTE CHARACTER?
              0A     12   00B6   236          BNEQ    15$                              ;IF NEQ NO
              53     D6   00B8   237          INCL    R3                               ;YES--INCREMENT LEVEL
              1B     13   00BA   238          BEQL    20$                              ;IF EQL FIRST QUOTE
     53    FF 8F     98   00BC   239          CVTBL   #-1,R3                           ;RESET QUOTE LEVEL
              15     11   00C0   240          BRB     20$                              ;CONTINUE
              53     D5   00C2   241  15$:    TSTL    R3                               ;INSIDE QUOTES?
              11     18   00C4   242          BGEQ    20$                              ;IF GEQ YES
     61 8F    52     91   00C6   243          CMPB    R2,#^A"a"                        ;LOWER CASE LETTER?
              0B     1F   00CA   244          BLSSU   20$                              ;IF LSSU NO
     7A 8F    52     91   00CC   245          CMPB    R2,#^A"z"                        ;LOWER CASE LETTER?
              05     1A   00D0   246          BGTRU   20$                              ;IF GTRU NO
FF A0    52   20     83   00D2   247          SUBB3   #32,R2,-1(R0)                    ;CONVERT TO UPPERCASE LETTER
           D6 51     F5   00D7   248  20$:    SOBGTR  R1,10$                           ;DECREMENT COUNT AND LOOP
                     04   00DA   249  30$:    RET                                      ;
```

```
                              00DB          .SBTTL  MAIL$GETMSG - Find message text for code
                              00DB    ;++
                              00DB    ; Functional description:
                              00DB    ;
                              00DB    ;         return descriptor for message code
                              00DB    ;
                              00DB    ; inputs:
                              00DB    ;
                              00DB    ;         4(ap) = value of code to lookup
                              00DB    ;
                              00DB    ; routine value:
                              00DB    ;
                              00DB    ;         r0 = address of descriptor of message text
                              00DB    ;
                              00DB    ;--
                       0004   00DB              .ENTRY  MAIL$GETMSG,^M<R2>
                              00DD
  52    00000000'EF     9E    00DD              MOVAB   L^MSGDESC,R2
      62   0200 8F      3C    00E4              MOVZWL  #512,(R2)
                              00E9              $GETMSG_S MSGID=4(AP),-
                              00E9                      MSGLEN=MSGDESC,-
                              00E9                      BUFADR=MSGDESC,-
                              00E9                      FLAGS=#1
              50   52   D0    0103              MOVL    R2,R0
                        04    0106              RET
```

```
                                0107           .SBTTL  MAIL$FAO_GETMSG, GETMSG and then FAO message
                                0107     ;++
                                0107     ; FUNCTIONAL DESCRIPTION:
                                0107     ;
                                0107     ;         This routine performs a $GETMSG on a message, then does a $FAO,
                                0107     ;         and returns the address of the string descriptor of the result.
                                0107     ;
                                0107     ; Inputs:
                                0107     ;
                                0107     ;         4(AP) = Value of message code
                                0107     ;         8(AP) = Start of $fao arglist
                                0107     ;
                                0107     ;--
                          0004  0107           .ENTRY  MAIL$FAO_GETMSG,^M<R2>
                  04 AC    DD   0109           PUSHL   4(AP)
           FFCA CF    01   FB   010C           CALLS   #1,W^MAIL$GETMSG
    52   00000008'EF       9E   0111           MOVAB   FAODESC,R2                  ;GET ADDRESS OF BUFFER DESCRIPTOR
       62    0200 8F       3C   0118           MOVZWL  #512,(R2)                   ;RESET DESCRIPTOR
            51    50       D0   011D           MOVL    R0,R1                       ;GET ADDRESS OF CONTROL STRING DESCR
                                0120           $FAOL_S CTRSTR=(R1),-               ;DO THE FAO
                                0120                   OUTLEN=(R2),-
                                0120                   OUTBUF=(R2),-
                                0120                   PRMLST=8(AP)
                  03 50    E9   0130           BLBC    R0,10$                      ;IF THERE IS AN ERROR, WILL ACCVIO
            50    52       D0   0133           MOVL    R2,R0                       ; EVENTUALLY
                           04   0136     10$:  RET
                          0137   304          .SBTTL  MAIL$MATCH_NAME, general wild card matching
                          0137   305  ;++
                          0137   306  ; Functional Description:
                          0137   307  ;       This routine performs the general embedded wild card matching
                          0137   308  ;       algorithm.
                          0137   309  ;
                          0137   310  ; Calling Sequence:
                          0137   311  ;       ret_status.wlc.v = STR$MATCH_NAME (CAND.rt.dx,PATRN.rt.dx)
                          0137   312  ;
                          0137   313  ; Formal Parameters:
                          0137   314  ;       CAND.rt.dx         Address of string descriptor for candidate string
                          0137   315  ;                           (The current item being looked at)
                          0137   316  ;       PATRN.rt.dx        Address of string descriptor for pattern string
                          0137   317  ;                           (The item looking for)
                          0137   318  ;
                          0137   319  ; Implicit Inputs:
                          0137   320  ;       none
                          0137   321  ;
                          0137   322  ; Output Parameters:
                          0137   323  ;       none
                          0137   324  ;
                          0137   325  ; Implicit Outputs:
                          0137   326  ;       none
                          0137   327  ;
                          0137   328  ; Routines Called:
                          0137   329  ;       STR$ANALYZE_SDESC_R1
                          0137   330  ;
                          0137   331  ; Routine Value:
                          0137   332  ;       STR$_MATCH   if the strings match.
                          0137   333  ;       STR$_NOMATCH if the strings don't match
                          0137   334  ;
                          0137   335  ; Signals:
                          0137   336  ;       Errors from STR$ANALYZE_SDESC
                          0137   337  ;
                          0137   338  ; Side Effects:
                          0137   339  ;       none
                          0137   340  ;
                          0137   341  ;--
            00000001      0137   342          STR$_MATCH = 1
            00000000      0137   343          STR$_NOMATCH = 0
                          0137   344
                03FC      0137   345          .ENTRY  mail$match_name,^M<R2,R3,R4,R5,R6,R7,R8,R9>
                          0139   346
   50   04 AC    D0       0139   347          MOVL    4(AP),R0                   ; get first descriptor address
00000000'GF      16       013D   348          JSB     G^STR$ANALYZE_SDESC_R1     ; extract string length and address
        7E 50    7D       0143   349          MOVQ    R0,-(SP)                   ; save descriptor
   50   08 AC    D0       0146   350          MOVL    8(AP),R0                   ; get second descriptor address
00000000'GF      16       014A   351          JSB     G^STR$ANALYZE_SDESC_R1     ; analyze second descriptor
        54 50    7D       0150   352          MOVQ    R0,R4                      ; set up for match algorithm
        52 8E    7D       0153   353          MOVQ    (SP)+,R2                   ; retrieve first descriptor
        50 00    D0       0156   354          MOVL    #STR$_NOMATCH,R0           ; Assume failure
           56    D4       0159   355          CLRL    R6                         ; Clear saved candidate count
                          015B   356  ;
                          015B   357  ; Main scanning loop.
                          015B   358  ;
           54    D7       015B   359  10$:    DECL    R4                         ; Pattern exhausted?
           24    19       015D   360          BLSS    30$                        ; Branch if yes
```

```
      51    85    9A  015F          MOVZBL  (R5)+,R1          ; Get next character in pattern
      2A    51    91  0162          CMPB    R1,#^A'*'         ; Pattern specifies wild string?
            24    13  0165          BEQL    60$               ; Branch if yes
            52    D7  0167          DECL    R2                ; Candidate exhausted?
            1F    19  0169          BLSS    50$               ; Branch if yes
      83    51    91  016B          CMPB    R1,(R3)+          ; Compare pattern to candidate
            EB    13  016E          BEQL    10$               ; Branch if pattern equals candidate
      25    51    91  0170          CMPB    R1,#^A'%'         ; Pattern specifies wild character?
            E6    13  0173          BEQL    10$               ; Branch if yes
                      0175  ;
                      0175  ; We have detected a mismatch, or we are out of pattern while there is
                      0175  ; candidate left.  Back up to the last '*', advance a candidate character,
                      0175  ; and try again.
                      0175  ;
            56    D7  0175  20$:    DECL    R6                ; Count a saved candidate character
            11    19  0177          BLSS    50$               ; Branch if no saved candidate
            57    D6  0179          INCL    R7                ; Set to try next character
      52    56    7D  017B          MOVQ    R6,R2             ; Restore descriptors to backup point
      54    58    7D  017E          MOVQ    R8,R4             ;
            D8    11  0181          BRB     10$               ; Continue testing
                      0183  ;
                      0183  ; Here when pattern is exhausted.
                      0183  ;
            52    D5  0183  30$:    TSTL    R2                ; Candidate exhausted?
            EE    12  0185          BNEQ    20$               ; Branch if no
                      0187  ;
                      0187  ; Here to return.
                      0187  ;
      50    01    D0  0187  40$:    MOVL    #STR$_MATCH,R0    ; Set success return
                  04  018A  50$:    RET                       ; Return
                      018B  ;
                      018B  ; We have detected a '*' in the pattern.  Save the pointers for backtracking.
                      018B  ;
            54    D5  018B  60$:    TSTL    R4                ; Pattern null after '*'?
            F8    13  018D          BEQL    40$               ; Branch if yes
      56    52    7D  018F          MOVQ    R2,R6             ; Save descriptors of both strings
      58    54    7D  0192          MOVQ    R4,R8             ;
            C4    11  0195          BRB     10$               ; Continue testing
```

```
                          0197           .SBTTL  MAIL$READ_ERROR_TEXT
                          0197   ;
                          0197   ; FUNCTIONAL DESCRIPTION:
                          0197   ;
                          0197   ;       READ THE ERROR MESSAGE TEXT FROM THE REMOTE NODE AND SIGNAL
                          0197   ;       THEM ALL AT ONCE.
                          0197   ;
                          0197   ; INPUTS:
                          0197   ;
                          0197   ;       4(AP) CONTEXT BLOCK ADDRESS
                          0197   ;       8(AP) ADDR OF ROUTINE TO CALL TO READ NEXT RECORD
                          0197   ;
                          0197   ;       QUITS READING ON BYTE OF 0
                          0197   ;
                          0197   ;
                          0197   ; GET STATUS MESSAGE(S) FROM SLAVE AND SIGNAL
                          0197   ;
                    001C  0197           .ENTRY MAIL$READ_ERROR_TEXT,^M<R2,R3,R4>
               53   D4    0199           CLRL    R3                      ;SET END-OF-MESSAGES MARKER
                          019B   20$:
      5E    FE00 CE   DE  019B           MOVAL   -MAIL$K_INBUFFSZ(SP),SP ;CREATE MESSAGE BUFFER
               53   DD    01A0           PUSHL   R3                      ;STACK ADDR OF PREVIOUS MSG DESC
            04 AE   9F    01A2           PUSHAB  4(SP)                   ;CREATE DESCRIPTOR OF THIS MSG DESC
      00000200 8F   DD    01A5           PUSHL   #MAIL$K_INBUFFSZ        ;...
           54  5E   D0    01AB           MOVL    SP,R4                   ;SAVE ADDR OF THIS ONE
               54   DD    01AE           PUSHL   R4                      ;STACK DESCRIPTOR ADDRESS
            04 AC   DD    01B0           PUSHL   4(AP)                   ;STACK CONTEXT ADDRESS
      08 BC    02   FB    01B3           CALLS   #2,@8(AP)               ;CALL GET-ROUTINE
         0A    50   E9    01B7           BLBC    R0,30$                  ;TREAT ERROR AS END OF MESSAGE
         04    B4   95    01BA   27$:    TSTB    @4(R4)                  ;END OF MESSAGES?
               05   13    01BD           BEQL    30$                     ;BR IF YES - SIGNAL THEM
         53    54   D0    01BF           MOVL    R4,R3                   ;SET NEW PREVIOUS DESC ADDR
               D7   11    01C2           BRB     20$                     ;GET NEXT MESSAGE
                          01C4   30$:
               54   D4    01C4           CLRL    R4                      ;INIT SIGNAL ARGUMENT COUNT
                          01C6   40$:
               53   DD    01C6           PUSHL   R3                      ;SET ADDR OF MESSAGE DESC
               1C   13    01C8           BEQL    60$                     ;BRANCH IF NONE
         7E    01   B0    01CA           MOVW    #1,-(SP)                ;SET MESSAGE FLAGS (NO %MAIL-F-TEXT,)
         7E    01   B0    01CD           MOVW    #1,-(SP)                ;SET FAO COUNT
      00001130'8F   DD    01D0           PUSHL   #SHR$_TEXT!-            ;SET MESSAGE NAME
                          01D6           <MAIL$_FACILITY @ STS$V_FAC_NO>
         54    03   C0    01D6           ADDL    #3,R4                   ;INCREMENT SIGNAL ARGUMENT COUNT
      53    08 A3   D0    01D9           MOVL    8(R3),R3                ;GET ADDR OF NEXT DESC
               E7   12    01DD           BNEQ    40$                     ;BR IF THERE IS ONE
   00000000'GF 54   FB    01DF           CALLS   R4,G^LIB$SIGNAL         ;SIGNAL THE MESSAGES
               04         01E6   60$:    RET                             ;DONE
                          01E7
                          01E7
                          01E7
```

```
                        01E7         .SBTTL  MAIL$INCLINKADR - INCREMENT LINK ADDRESSEE COUNT
                        01E7   ;++
                        01E7   ; FUNCTIONAL DESCRIPTION:
                        01E7   ;
                        01E7   ;       INCREMENT THE ADDRESSEE COUNT ASSOCIATED WITH A LINK
                        01E7   ;
                        01E7   ; INPUTS:
                        01E7   ;
                        01E7   ;       4(AP)   ADDRESS OF LINK BLOCK
                        01E7   ;
                        01E7   ; OUTPUTS:
                        01E7   ;
                        01E7   ;       LNK_L_ADRCNT IN LINK BLOCK INCREMENTED IF LINK BLOCK ADDRESS
                        01E7   ;       NON-0
                        01E7   ;
                        01E7   ;--
                  0004  01E7         .ENTRY  MAIL$INCLINKADR,^M<R2>
                        01E9
       52  04 AC    D0  01E9         MOVL    4(AP),R2                        ;GET LINK BLOCK ADDRESS
               08   13  01ED         BEQL    10$                             ;IF EQL ALL DONE
    03 2E A2   01   E0  01EF         BBS     #LNK_V_DEAD,LNK_B_FLAGS(R2),10$ ;DON'T INCREMENT IT IF DEAD
            08 A2   D6  01F4         INCL    LNK_L_ADRCNT(R2)                ;INCREMENT THE COUNT
                    04  01F7   10$:  RET
```

```
                           01F8   475          .SBTTL  MAIL$DECLINKADR - DECREMENT LINK ADDRESSEE COUNT
                           01F8   476
                           01F8   477 ;++
                           01F8   478 ; FUNCTIONAL DESCRIPTION:
                           01F8   479 ;
                           01F8   480 ;        DECREMENTS THE ADDRESSEE COUNT ASSOCIATED WITH A LINK
                           01F8   481 ;
                           01F8   482 ; INPUTS:
                           01F8   483 ;
                           01F8   484 ;        4(AP)   ADDRESS OF THE LINK BLOCK
                           01F8   485 ;
                           01F8   486 ;--
                           01F8   487
                     0004  01F8   488          .ENTRY  MAIL$DECLINKADR,^M<R2>
         52    04 AC   D0  01FA   489          MOVL    4(AP),R2                        ;GET ADDRESS OF LINK BLOCK
                  08   13  01FE   490          BEQL    10$                             ;IF 0 THEN NONE
               08 A2   D5  0200   491          TSTL    LNK_L_ADRCNT(R2)                ;ALREADY 0?
                  03   13  0203   492          BEQL    10$
               08 A2   D7  0205   493          DECL    LNK_L_ADRCNT(R2)                ;DECREMENT IT'S ADDRESEE COUNT
                       04  0208   494 10$:     RET
                     0209  496          .SBTTL  MAIL$DELEMPLINK - DELETE ALL LINKS WITH NO ADDRESSEES
                     0209  497 ;++
                     0209  498 ; FUNCTIONAL DESCRIPTION
                     0209  499 ;
                     0209  500 ;        DELETE ALL LOGICAL LINKS WHICH HAVE NO ADDRESSEES ASSOCIATED
                     0209  501 ;        WITH THEM
                     0209  502 ;
                     0209  503 ; INPUTS:
                     0209  504 ;
                     0209  505 ;        THE LINK LIST
                     0209  506 ;
                     0209  507 ;--
                     0209  508
               001C  0209  509          .ENTRY  MAIL$DELEMPLINK,^M<R2,R3,R4>
                     020B  510
52    04 AC    D0    020B  511          MOVL    4(AP),R2                ;START AT THE HEAD OF THE LIST
   54    52    D0    020F  512          MOVL    R2,R4                   ;SAVE LISTHEAD ADDRESS
   52    62    D0    0212  513 10$:     MOVL    LNK_L_FLINK(R2),R2      ;GET NEXT LINK BLOCK
   54    52    D1    0215  514 20$:     CMPL    R2,R4                   ;DONE WITH LIST?
         12    13    0218  515          BEQL    30$                     ;IF EQL YES
      08 A2    D5    021A  516          TSTL    LNK_L_ADRCNT(R2)        ;NO--ANY ADDRESSEES THIS NODE?
         F3    12    021D  517          BNEQ    10$                     ;IF NEQ YES
   53    62    D0    021F  518          MOVL    LNK_L_FLINK(R2),R3      ;NO--GET NEXT IN LIST
   52    62    0F    0222  519          REMQUE  (R2),R2                 ;REMOVE THIS LINK FROM THE QUEUE
         17    10    0225  520          BSBB    DEALLOC_LNK             ;DELETE THE LINK AND MEMORY
   52    53    D0    0227  521          MOVL    R3,R2                   ;CONTINUE SCANNING
         E9    11    022A  522          BRB     20$                     ;CONTINUE
               04    022C  523 30$:     RET
```

```
                         022D          .SBTTL  MAIL$DELETELINK - DELETE ALL THE LOGICAL LINKS
                         022D    ;++
                         022D    ; FUNCTIONAL DESCRIPTION:
                         022D    ;
                         022D    ;         DELETE ALL THE LOGICAL LINKS IN THE LOGICAL LINK LIST.
                         022D    ;
                         022D    ; CALLING SEQUENCE:
                         022D    ;         CALL MAIL$DELETELINK(LISTHEAD)
                         022D    ;
                         022D    ; INPUT PARAMETERS:
                         022D    ;         NONE
                         022D    ;
                         022D    ; IMPLICIT INPUTS:
                         022D    ;
                         022D    ; OUTPUT PARAMETERS:
                         022D    ;         NONE
                         022D    ;
                         022D    ; IMPLICIT OUTPUTS:
                         022D    ;         NONE
                         022D    ;
                         022D    ; COMPLETION CODES:
                         022D    ;         NONE
                         022D    ;
                         022D    ; SIDE EFFECTS:
                         022D    ;         ALL LOGICAL LINKS ARE DELETED AND SLAVE MAIL JOBS ARE STOPPED.
                         022D    ;
                         022D    ;--
                   000C  022D          .ENTRY  MAIL$DELETELINK,-           ;DELETE ALL THE LOGICAL LINKS
                         022F                  ^M<R2,R3>                   ;(ENTRY MASK)
      53   04 AC   D0    022F          MOVL    4(AP),R3
                         0233    10$:
      52   00 B3   0F    0233          REMQUE  @(R3),R2                    ;REMOVE NEXT ENTRY
              04   1D    0237          BVS     20$                         ;BR IF NONE - ALL DONE
              03   10    0239          BSBB    DEALLOC_LNK                 ;DEALLOCATE THE LINK BLOCK
              F6   11    023B          BRB     10$                         ;CHECK FOR ANOTHER
                         023D    20$:
                   04    023D          RET                                 ;RETURN
                         023E    ;
                         023E    ; DEALLOCATE THE LINK BLOCK AFTER DELETING THE LOGICAL LINK
                         023E    ;
                         023E    ; LINK BLOCK ADDRESS IN R2
                         023E    ;
                         023E    DEALLOC_LNK:
   21 2E A2   02   E0    023E          BBS     #LNK_V_ALTP,LNK_B_FLAGS(R2),20$ ;BR IF ALTERNATE PROTOCOL
                         0243          $DASSGN_S CHAN=LNK_W_CHAN(R2)       ;DELETE THE LOGICAL LINK
      50   4F A2   9A    024E    10$:  MOVZBL  LNK_B_PNLEN(R2),R0          ;GET LENGTH OF PROTOCOL NAME
           50 A0   9F    0252          PUSHAB  LNK_C_LENGTH(R0)            ;SET SIZE OF ENTRY TO DEALLOCATE
              52   DD    0255          PUSHL   R2                          ;SET ADDR OF ENTRY
              6E   DF    0257          PUSHAL  (SP)                        ;SET ADDR OF ADDR OF ENTRY
           08 AE   DF    0259          PUSHAL  8(SP)                       ;SET ADDR OF SIZE OF ENTRY
00000000'GF   04   FB    025C          CALLS   #4,G^LIB$FREE_VM            ;DEALLOCATE THE LIST ENTRY
                   05    0263          RSB
      50   10 A2   D0    0264    20$:  MOVL    LNK_L_TFRADR(R2),R0         ;WAS ROUTINE OBTAINED?
              E4   13    0268          BEQL    10$                         ;IF EQL NO--JUST CONTINUE
              07   DD    026A          PUSHL   #LNK_C_OUT_DEACCESS         ;CODE TO DEACESS
           0C A2   9F    026C          PUSHAB  LNK_C_CONTEXT(R2)           ;CONTEXT ADDRESS
```

```
                  60   02   FB 026F   582          CALLS   #2,(R0)          ;CALL ALTERNATE NET PROTOCOL HANDLER
                       DA   11 0272   583          BRB     10$              ;DEALLOCATE LINK BLOCK
                               0274   584
                               0274   585          .END
```

```
BUFF_DESC                       = 00000004                FAOARG1                         = 00000008
CNCTDEF                         = 00000000                FAOBUF                            0000000C R       02
CNCT_B_FILRAT                   = 00000080                FAODESC                           00000008 R       02
CNCT_B_FILRFM                   = 00000081                LIB$FREE_VM                       ********     X   03
CNCT_B_FLAGS                    = 00000084                LIB$GET_VM                        ********     X   03
CNCT_B_TRAN                     = 00000085                LIB$SIGNAL                        ********     X   03
CNCT_C_BUFSIZ                   = 00000200                LNKDEF                          = 00000000
CNCT_C_GETADDR                  = 00000001                LNK_B_FLAGS                     = 0000002E
CNCT_C_GETMSG                   = 00000004                LNK_B_NODLEN                    = 0000002F
CNCT_C_GETSENDER                = 00000000                LNK_B_PNLEN                     = 0000004F
CNCT_C_GETSUBJ                  = 00000003                LNK_C_IN_CKUSER                 = 0000000A
CNCT_C_GETTO                    = 00000002                LNK_C_IN_CONNECT                = 00000008
CNCT_C_LENGTH                   = 00000286                LNK_C_IN_FILE                   = 0000000D
CNCT_L_BLINK                    = 00000004                LNK_C_IN_SENDER                 = 00000009
CNCT_L_FILERR                   = 00000048                LNK_C_IN_SUBJ                   = 0000000C
CNCT_L_FILESTS                  = 0000004C                LNK_C_IN_TO                     = 0000000B
CNCT_L_FILESTV                  = 00000050                LNK_C_IO_READ                   = 0000000E
CNCT_L_FLINK                    = 00000000                LNK_C_IO_WRITE                  = 0000000F
CNCT_L_MSGBLKS                  = 0000003C                LNK_C_LENGTH                    = 00000050
CNCT_L_NADDRS                   = 00000038                LNK_C_OUT_CKSEND                = 00000006
CNCT_L_NRECS                    = 00000064                LNK_C_OUT_CKUSER                = 00000002
CNCT_L_SPARES                   = 00000068                LNK_C_OUT_CONNECT               = 00000000
CNCT_M_BLKMODE                  = 00000004                LNK_C_OUT_DEACCESS              = 00000007
CNCT_M_DISCONNECT               = 00000001                LNK_C_OUT_FILE                  = 00000005
CNCT_M_SQ                       = 00000002                LNK_C_OUT_SENDER                = 00000001
CNCT_Q_ADRLST                   = 00000028                LNK_C_OUT_SUBJ                  = 00000004
CNCT_Q_CCDESC                   = 00000020                LNK_C_OUT_TO                    = 00000003
CNCT_Q_ESDESC                   = 00000054                LNK_L_ADRCNT                    = 00000008
CNCT_Q_FROMDESC                 = 00000008                LNK_L_BLINK                     = 00000004
CNCT_Q_IOSB                     = 00000040                LNK_L_CONTEXT                   = 0000000C
CNCT_Q_LNKLST                   = 00000030                LNK_L_FLINK                     = 00000000
CNCT_Q_SENDQ                    = 0000005C                LNK_L_SPARES                    = 00000020
CNCT_Q_SUBJDESC                 = 00000018                LNK_L_STS                       = 0000001C
CNCT_Q_TODESC                   = 00000010                LNK_L_TFRADR                    = 00000010
CNCT_S_ADRLST                   = 00000008                LNK_M_ALTP                      = 00000004
CNCT_S_BUFFER                   = 00000200                LNK_M_BLKMODE                   = 00000010
CNCT_S_CCDESC                   = 00000008                LNK_M_DEAD                      = 00000002
CNCT_S_CNCTDEF                  = 00000286                LNK_M_FSENT                     = 00000008
CNCT_S_ESDESC                   = 00000008                LNK_M_MSGSNT                    = 00000001
CNCT_S_FROMDESC                 = 00000008                LNK_Q_IOSB                      = 00000014
CNCT_S_IOSB                     = 00000008                LNK_S_IOSB                      = 00000008
CNCT_S_LNKLST                   = 00000008                LNK_S_LNKDEF                    = 00000050
CNCT_S_SENDQ                    = 00000008                LNK_S_NODE                      = 0000001F
CNCT_S_SPARES                   = 00000018                LNK_S_SPARES                    = 00000008
CNCT_S_SUBJDESC                 = 00000008                LNK_T_NODE                      = 00000030
CNCT_S_TODESC                   = 00000008                LNK_T_PNAM                      = 00000050
CNCT_T_BUFFER                   = 00000086                LNK_V_ALTP                      = 00000002
CNCT_T_RAB                      = 00000286                LNK_V_BLKMODE                   = 00000004
CNCT_V_BLKMODE                  = 00000002                LNK_V_DEAD                      = 00000001
CNCT_V_DISCONNECT               = 00000000                LNK_V_FSENT                     = 00000003
CNCT_V_SQ                       = 00000001                LNK_V_MSGSNT                    = 00000000
CNCT_W_CHAN                     = 00000082                LNK_W_CHAN                      = 0000002C
CNCT_W_IOSB1                    = 00000040                LNK_W_MBXCHAN                   = 0000002A
CNCT_W_IOSB2                    = 00000042                LNK_W_SPAREW                    = 00000028
CNCT_W_IOSB3                    = 00000044                MAIFDEF                         = 00000000
CNCT_W_IOSB4                    = 00000046                MAIF_L_FLAGS                    = 00000000
DEALLOC_LNK                       0000023E R       03     MAIF_M_ALTP                     = 00000400
```

```
MAIF_M_ATTACHMENT                = 00080000
MAIF_M_BATCH                     = 00000200
MAIF_M_CALEDT                    = 00008000
MAIF_M_CAPTIVE                   = 00004000
MAIF_M_CTRLCFL                   = 00000100
MAIF_M_DFMSG                     = 00001000
MAIF_M_EDTEDT                    = 00010000
MAIF_M_EDTXYZ                    = 00020000
MAIF_M_FILOPN                    = 00000800
MAIF_M_ISAM                      = 00000001
MAIF_M_ITERM                     = 00000004
MAIF_M_NETJOB                    = 00000002
MAIF_M_OTERM                     = 00000008
MAIF_M_RDHOLD                    = 00000020
MAIF_M_READ_FL                   = 00000040
MAIF_M_RECL                      = 00000080
MAIF_M_SCOPE                     = 00000010
MAIF_M_SERVERLOOP                = 00040000
MAIF_M_USEREDIT                  = 00002000
MAIF_S_MAIFDEF                   = 00000004
MAIF_V_ALTP                      = 0000000A
MAIF_V_ATTACHMENT                = 00000013
MAIF_V_BATCH                     = 00000009
MAIF_V_CALEDT                    = 0000000F
MAIF_V_CAPTIVE                   = 0000000E
MAIF_V_CTRLCFL                   = 00000008
MAIF_V_DFMSG                     = 0000000C
MAIF_V_EDTEDT                    = 00000010
MAIF_V_EDTXYZ                    = 00000011
MAIF_V_FILOPN                    = 0000000B
MAIF_V_ISAM                      = 00000000
MAIF_V_ITERM                     = 00000002
MAIF_V_NETJOB                    = 00000001
MAIF_V_OTERM                     = 00000003
MAIF_V_RDHOLD                    = 00000005
MAIF_V_READ_FL                   = 00000006
MAIF_V_RECL                      = 00000007
MAIF_V_SCOPE                     = 00000004
MAIF_V_SERVERLOOP                = 00000012
MAIF_V_USEREDIT                  = 0000000D
MAIL$CONFIRM                       0000003C RG      03
MAIL$DECLINKADR                    000001F8 RG      03
MAIL$DELEMPLINK                    00000209 RG      03
MAIL$DELETELINK                    0000022D RG      03
MAIL$FAO_GETMSG                    00000107 RG      03
MAIL$GETMSG                        000000DB RG      03
MAIL$GL_FLAGS                      ********    X    03
MAIL$INCLINKADR                    000001E7 RG      03
MAIL$IOSUB_INIT                    00000000 RG      03
MAIL$K_INBUFFSZ                  = 00000200
MAIL$L_SMG_KEYBOARD                ********    X    03
MAIL$MATCH_NAME                    00000137 RG      03
MAIL$READ_ERROR_TEXT               00000197 RG      03
MAIL$UPCASE                        00000076 RG      03
MAIL$UPCASE_Q                      0000009D RG      03
MAIL$_FACILITY                     ********    X    03
MSGBUF                             00000004 R       02

MSGDESC                            00000000 R       02
SHR$_TEXT                        = 00001130
SMG$READ_STRING                    ********    X    03
STR$ANALYZE_SDESC_R1               ********    X    03
STR$_MATCH                       = 00000001
STR$_NOMATCH                     = 00000000
STS$V_FAC_NO                     = 00000010
SYS$DASSGN                         ********   GX    03
SYS$FAOL                           ********   GX    03
SYS$GETMSG                         ********   GX    03
```

```
                                                      +----------------+
                                                      ! Psect synopsis !
                                                      +----------------+

PSECT name                       Allocation           PSECT No.  Attributes
----------                       ----------           ---------  ----------
.  ABS  .                        00000000  (     0.)  00 (  0.)  NOPIC    USR    CON    ABS    LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
$ABS$                            00000000  (     0.)  01 (  1.)  NOPIC    USR    CON    ABS    LCL NOSHR   EXE   RD     WRT NOVEC BYTE
$OWN$                            00000010  (    16.)  02 (  2.)  NOPIC    USR    CON    REL    LCL NOSHR NOEXE   RD     WRT NOVEC LONG
$CODE$                           00000274  (   628.)  03 (  3.)  NOPIC    USR    CON    REL    LCL NOSHR   EXE   RD   NOWRT NOVEC LONG

                                                  +------------------------+
                                                  ! Performance indicators !
                                                  +------------------------+

Phase                         Page faults    CPU Time       Elapsed Time
-----                         -----------    --------       ------------
Initialization                         29    00:00:00.03    00:00:02.76
Command processing                    111    00:00:00.44    00:00:01.67
Pass 1                                195    00:00:02.46    00:00:14.85
Symbol table sort                       0    00:00:00.29    00:00:01.81
Pass 2                                113    00:00:00.87    00:00:03.44
Symbol table output                    22    00:00:00.10    00:00:00.10
Psect synopsis output                   2    00:00:00.02    00:00:00.02
Cross-reference output                  0    00:00:00.00    00:00:00.00
Assembler run totals                  474    00:00:04.21    00:00:24.65

The working set limit was 1350 pages.
21256 bytes (42 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 320 non-local and 32 local symbols.
585 source lines were read in Pass 1, producing 51 object records in Pass 2.
20 pages of virtual memory were used to define 15 macros.

                                                 +--------------------------+
                                                 ! Macro library statistics !
                                                 +--------------------------+

Macro library name                               Macros defined
------------------                               --------------
_$255$DUA28:[MAIL.OBJ]MAILMAC.MLB;1                          3
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                               0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                            9
TOTALS (all libraries)                                      12

385 GETS were required to define 12 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:IOSUBS/OBJ=OBJ$:IOSUBS MSRC$:IOSUBS/UPDATE=(ENH$:IOSUBS)+EXECML$/LIB+LIB$:MAILMAC/LIB
```

0229 AH-BT13A-SE
VAX/VMS V4.0

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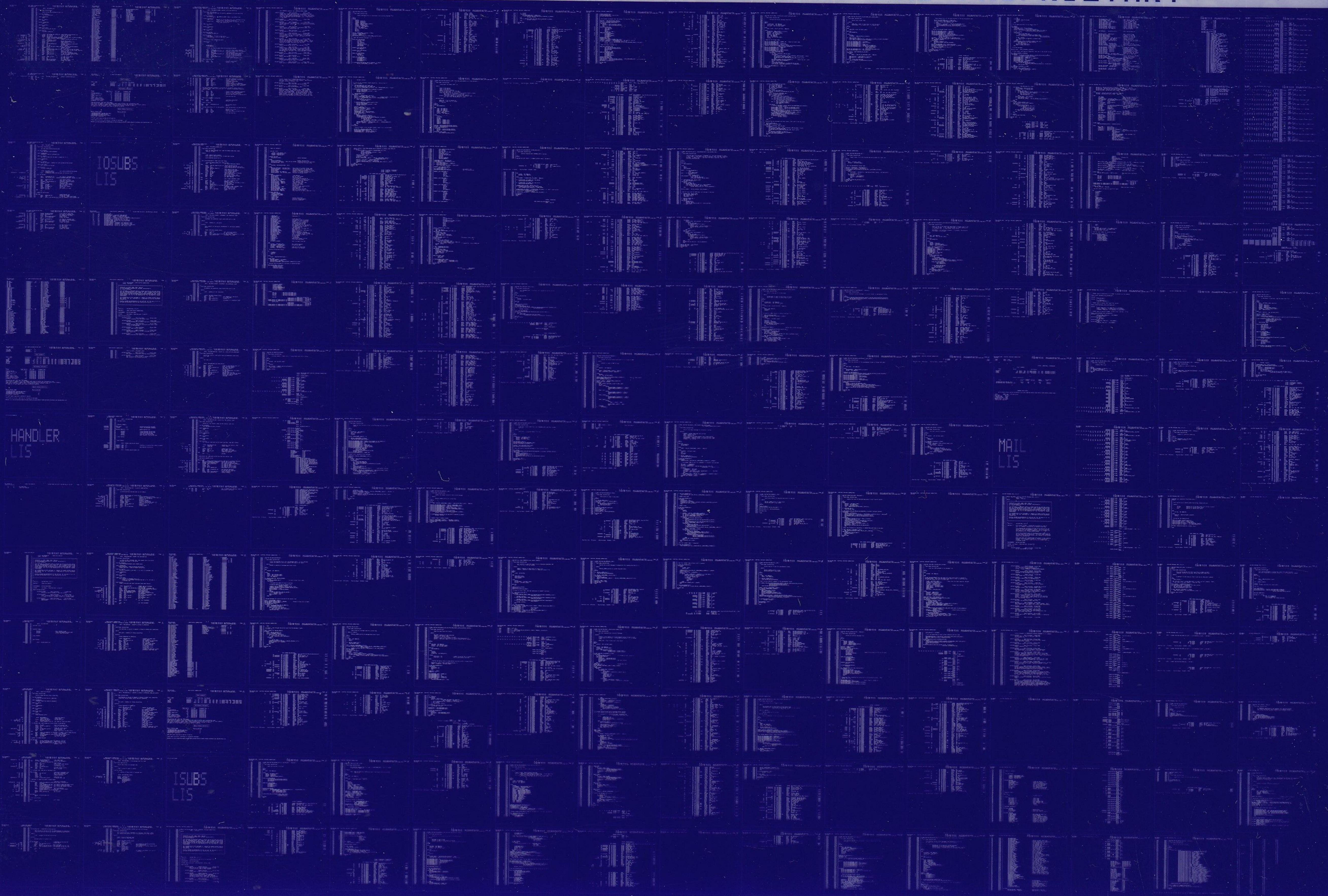

IOSUBS
LIS

HANDLER
LIS

MAIL
LIS

ISUBS
LIS